

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



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*Mathematical Modeling Of Some Applications By
Second Order Linear Differential Equation*

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Abstract

This seminar studies how to solve some engineering and physical problems through mathematical modeling using the second order linear ordinary differential equations, here we focus on two applications one as an engineering problem and the other as a physical problem.

The topic is covered in three chapters, the first one introduced methods of solving ordinary linear differential equation of second order, the second chapter focus on the first applications that talks about solving the mechanical vibration of single degree of freedom problem. Finally, the third chapter related to the physical application which talk about solving the electric LRC series circuit.